



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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M/037/006

January 7, 1997

TO: Board of Oil, Gas and Mining

THRU: Mary Ann Wright, Associate Director *MAW*

THRU: D. Wayne Hedberg, Permit Supervisor *DWH*

FROM: Anthony A. Gallegos, Senior Reclamation Specialist *aa*

RE: Request for Board Approval, Amount and Form of Proposed Replacement Reclamation Surety, International Uranium (USA) Corporation (IUC), Rim-Columbus Mine, M/037/006, San Juan County, Utah

At the request of the operator, the Division seeks the Board's conditional approval of the amount and form of reclamation surety proposed by IUC for the Rim-Columbus Mine, located in San Juan County, Utah. The form of surety proposed is a surety bond for the amount of \$44,100. The surety jointly lists the Division and BLM.

Energy Fuels Nuclear, Inc. is in the process of acquiring/transferring the Rim-Columbus Mine currently owned by Umetco Minerals Corporation. In turn, IUC is purchasing all the assets controlled by Energy Fuels Nuclear. Closing for the acquisition of Energy Fuels Nuclear by IUC is tentatively set for the end of January 1997. IUC is seeking conditional approval so the replacement surety can become effective at the time of the actual acquisition closing. If the Board accepts this proposal, the Division would not sign the forms transferring the site from Umetco to IUC until the actual surety is received. This operation is an underground uranium mine which has been in a state of suspension since 1984. Final signed copies of the Reclamation Contract will be available by the Board Hearing. Final signed copies of the surety bond will be available at the time of closing.

Attached for your review are copies of the following documents:

1. Summary checklist
2. Executive summary
3. Location maps
4. Reclamation surety estimate
5. Draft Reclamation Contract (Form MR-RC)
6. Draft Surety bond (Attachment B - MR Form 6)

Thank you for your time and consideration of this request.

jb
Attachments
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DOGM MINERALS PROGRAM

Checklist for Board Approval of FORM AND AMOUNT OF SURETY

Prepared January 6, 1997

Company Name: International Uranium (USA) Corp
 Mine Name: Rim-Columbus
 File No.: M/037/006

Items	Provided		Remarks
	Yes	No	
Executive Summary	X		
Location Map	X		
Reclamation Bond Estimate	X		1988 estimate and 1997 update
Signed Reclamation Contract		X	Signed copy available by Hearing date
Signed Power of Attorney/ Affidavit of Qualification			
Bond/Reclamation Surety	X		Signed copy available at time of Closing
Surety Sign Off (Other State/Federal Agencies)		X	Joint surety forms used
RDCC contacted		X	N/A

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EXECUTIVE SUMMARY

Prepared January 7, 1997

Mine Name: Rim-Columbus
Operator: International Uranium (USA) Corp
Three Park Central, Suite 900
1515 Arapahoe Street
Denver, Colorado 80202
Telephone: 303- 623-8317
Contact Person: Rick VanHorn (970) 243-1968

I.D. No.: M/037/006
County: San Juan
New/Existing: Existing
Mineral Ownership: BLM
Surface Ownership: BLM
Lease No.(s): N/A
Permit Term: Life of Mine

Life of Mine: 4-5 years

Legal Description: NW1/4, NW1/4 Section 29, NE1/4 NW1/4 & NW1/4 NE1/4, Section 30, SE1/4, SE1/4, Section 19, and the SW1/4, SW1/4, Section 20, Township 31 South, Range 25 East

Mineral(s) to be Mined: Uranium/Vanadium

Acres to be Disturbed: 17

Present Land Use: Grazing and Mining

Postmining Land Use: Grazing

Variances from Reclamation Standards (Rule R647) Granted: A letter to Atlas in 1985 states that the operator will be responsible for sealing the portals located on the side of the mesa (Columbus and Humbug), but no waste dump reclamation in this area is indicated. The Rim, Columbus and Humbug mines were all in operation prior to May 14, 1975. Little or no topsoil has been stockpiled for reclamation use. Accordingly, upon final reclamation, IUC will work with state and federal agencies to see if a reasonable source of topsoil can be identified and used for cover on the disturbed areas. Barring this, the dumps will be scarified, nutrients added, seeded and monitored for growth.

Soils and Geology

Soil Description: The characteristic site soil type consists of a weathered, uniformly graded, clayey sandy silt. Ores and associated waste rock are produced from the Salt Wash member of the Morrison Formation. Waste rock is a white, medium grained, sandstone which compacts well on waste dumps due to high clay content.

pH: 7.8 - 8.4

Special Handling Problems: None

Geology Description: Not available

Hydrology

Ground Water Description: Water is encountered in two places in the mine: 1) about 300 feet down the shaft, water sitting on top of the Brushy Basin formation flows in at a rate of from 3 to 5 gallons per minute,

contains no radionuclides, and is suitable for stock watering. 2) water present in the ore zone is generated at rates of less than 3 gallons per minute. Water pumped from the mine workings is treated at a barium chloride treatment plant just south of the head frame.

Surface Water Description: There are no surface waters in the area of the mine. The only surface concerns would be from local storm events causing minor erosion of the waste piles and this is monitored on a regular basis and corrective action taken if necessary.

Water Monitoring Plan: Water monitoring is conducted under the UPDES permit.

Ecology

Vegetation Type(s); Dominant Species: Pinion pine, juniper, sagebrush, russian thistle, rabbit brush, oak brush, Utah serviceberry, mormon tea, shadscale, greasewood, cheatgrass, indian ricegrass and yucca.

Dominant species are Pinyon pine, juniper and oak brush

Percent Surrounding Vegetative Cover: 0% on disturbed areas to approximately 10% on undisturbed areas.

Wildlife Concerns: None

Surface Facilities: A 700 foot deep shaft with head frame and hoist house, an office, dry room, shop and compressor building. East of the facility is a seven foot diameter ventilation hole equipped with a fan. South of these facilities is a barium chloride treatment facility consisting of one small building and two fenced retention ponds.

Mining and Reclamation Plan Summary:

During Operations: Uranium ore in the Saltwash sandstone formation is being mined underground through the Rim Shaft, the Columbus Incline, and the Humbug Incline. Mining is conducted using a modified room and pillar technique. The mining operation consists of sites disturbed prior to May 14, 1975. To minimize further disturbance of the area, existing ore pads, waste dumps, and access roads will be utilized. Access roads will be maintained by filling and/or blading. Original topsoil and vegetation on the mining sites has either been displaced or covered with muck from past mining operations. This makes recovery and respreading of topsoil impractical. Muck from the mining operation is stockpiled in specific locations. This material has not been classified as acid or alkali-producing, but has exhibited resistance to excessive erosion. There are no natural water bodies in the area and mine water is stored for on-site use. Disturbed areas and materials will be stabilized by regrading and seeding. Revegetation test plots will be planted to determine the best method for obtaining final stabilization. It is not anticipated at this time that any material will be taken out of the Humbug or Columbus portals; these will be used only for equipment access, ventilation and emergency escape. If and when it becomes necessary to expand the waste facilities at the Rim, any topsoil that can be salvaged will be removed and stockpiled for future reclamation use.

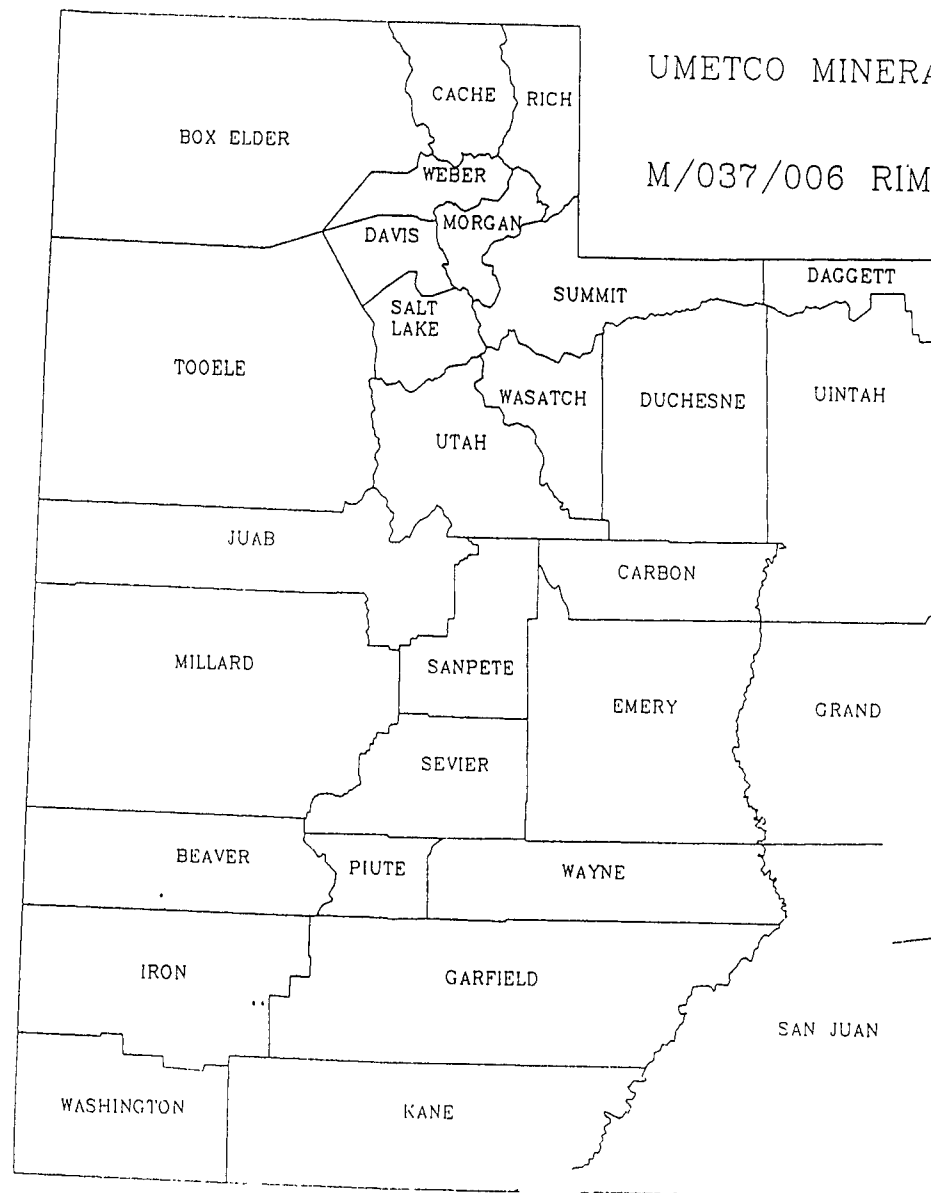
After Operations: Upon final abandonment of the mines, extraneous debris, scrap metal and wood, and unusable buildings will be buried or removed from the location. The inclines, shaft, and ventilation holes will be sealed to prevent unauthorized or accidental entry. Disturbed materials, primarily consisting of muck or waste dumps, will be regraded with a bulldozer into stable slopes and seeded. Immediate access roads and

the mining operation sites will also be regraded and seeded. All regrading will maintain, to the best ability, disturbed area natural drainages. Since topsoil is not available for resspreading, an approved seed mix will be seeded directly on the regraded areas. These areas will be monitored and reseeded if necessary. Additional or alternate reclamation practices can be used as they are developed. Scarification and other soil treatment techniques will be employed on compacted surfaces before seeding.

Surety

Amount: \$44,100
Form: Surety Bond
Renewable Term: 5 years (2002)

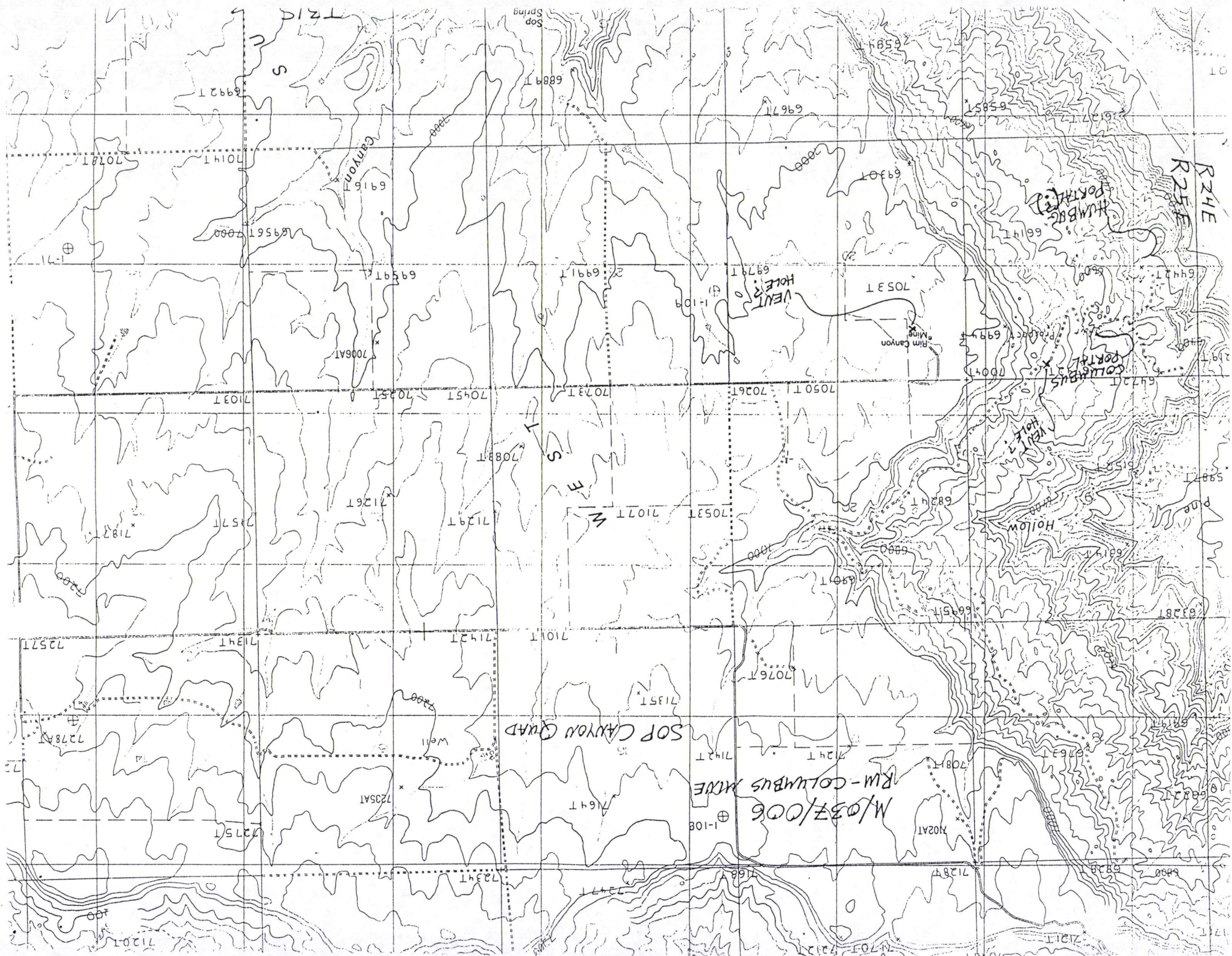
jb
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UMETCO MINERALS CORPORATION

M/037/006 RIM-COLUMBUS

RIM-COLUMBUS



Description:

This site encompasses approximately 16 acres. Twelve of these acres are located atop the mesa and the remaining four acres encompass waste dumps which are next to two portals on the side of the mesa. A letter by Sue Linner to Atlas in 1985 states that the operator will be responsible for sealing the portals located on the side of the mesa (Columbus and Humbug), but no waste dump reclamation in this area is indicated. Final reclamation of the site will also encompass removal of several small buildings and the hoist structure. The waste and stockpile areas and the treatment ponds will have to be regraded and covered with available topsoil.

<u>Item</u>	<u>Amount</u>	<u>Rate</u>	<u>Cost</u>
Removal of Structures and debris	Buildings and hoist	Lump sum (limited salvage)	\$5,000
Plug Boreholes	2	\$250/ea	,500
Seal Portals	2	\$750/ea	1,500
Fill & Seal Shaft	1	\$2,000/ea	2,000
Regrade & Topsoil 12 acres	160 hours D-7	\$110/hr	17,600
Rip & Seed 12 acres	D-7 w/one laborer 16 hours	\$125/hr	2,000
Seed	12 acres	\$60/ac	,700
		Subtotal	\$29,300
10% Contingency			2,900
Total in 1988 \$			32,200
Escalation (2.3% for 5 years)			3,900
Total in 1993 \$			\$36,100

SURETY ESTIMATE UPDATE

International Uranium (USA) Corporation

Rim-Columbus Mines M/037/006 San Juan County

file m37-06up.wb2

Prepared by Utah Division of Oil, Gas & Mining

last revision

01/06/97

DESCRIPTION:

- This update is for a transfer from Umetco Minerals Corp. to International Uranium (USA) Cor
- Energy Fuels Nuclear will soon become International Uranium Corporation
- 1988 base amount taken from the July 1988 estimate prepared by the Division
- There has been no mining activity at the site since 1984
- Underground mine workings were dewatered until 1993
- Permit transferred from Atlas Minerals Corp. to Umetco Minerals Corp. in 1989
- Surety was replaced by Umetco Minerals Corp. in 1994 due to a change in surety company
- Land ownership for the mine sites is BLM
- Escalation factors through 1995 are actual Means Historical Cost Indices
- Original permit area is approximately 17 acres; current disturbance is approximately 13 acres
- Total disturbed area from the 1994 estimate update = 13 ACRES

CALCULATIONS

	YR	ESCAL FACTOR	BOND AMOUNT
	1987	0.0195	\$0
BASE AMOUNT & YEAR	1988	0.0181	\$32,200
	1989	0.0177	\$32,770
	1990	0.0077	\$33,022
$F = P(1 + i)^{**n}$	1991	0.0127	\$33,442
F = Future Sum	1992	0.0221	\$34,181
P = Present Sum	1993	0.0261	\$35,073
i = Escalation Factor	1994	0.0321	\$36,199
n = number of periods	1995	0.0193	\$36,897
	1996	0.0258	\$37,849
	1997	0.0258	\$38,826
Three Yr Average = 2.58%	1998	0.0258	\$39,827
Used to Project 5 Yrs	1999	0.0258	\$40,855
Into the Future	2000	0.0258	\$41,909
From the Year 1997	2001	0.0258	\$42,990
	2002	0.0258	\$44,099

Updated Surety Amount Rounded (2002 \$)

\$44,100

** Average cost per acre =

3,392 (\$/ACRE)

NOTE: Previous Division estimate was \$36,100 (1993 \$)